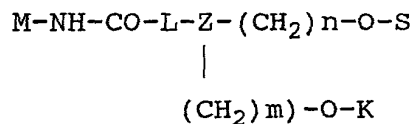


CLAIMS

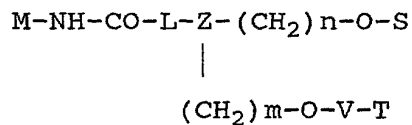
1. Labelling reagent having the structure



in which

- M is a detectable label
- L represents a linker having the structure $\text{-(CH}_2\text{)}_p\text{-}$ or the structure $\text{-(CH}_2\text{)}_p\text{-CO-NH-}$
- Z is either CH or N,
- S is a cleavable protective group
- n, m and p are, independently of one another, natural numbers from 1-15,
- O-K is either a phosphoramidite, or K = -V-T, such that T is a solid phase support material and V is a linking group containing a cleavable bond.

2. Labelled reactive support having the structure

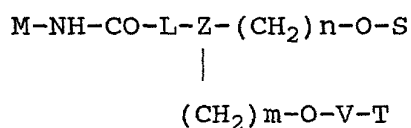


in which

- M is a detectable label
- L represents a linker having the structure $\text{-(CH}_2\text{)}_p\text{-}$ or the structure $\text{-(CH}_2\text{)}_p\text{-CO-NH-}$
- Z is either CH or N,
- S is a cleavable protective group,

- n, m and p are, independently of one another, natural numbers from 1-15,
- T is a solid phase support material, and
- V is a linking group which contains a cleavable bond.

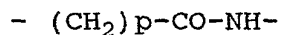
3. Labelled reactive support having the structure



in which

- M is a detectable label
- S is a cleavable protective group,
- n, m and p are, independently of one another, natural numbers from 1-15,
- T is a solid phase support material, and
- V is a linking group which contains a cleavable bond

characterized in that L represents a linker having the structure

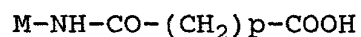


and p is a natural number from 1-15.

4. Support as claimed in claims 2-3, characterized in that the support material consists of glass particles having a defined pore size.

5. Support as claimed in claims 2-4, characterized in that the detectable label M is a fluorescent dye, preferably fluorescein.

6. Use of a molecule having the structure

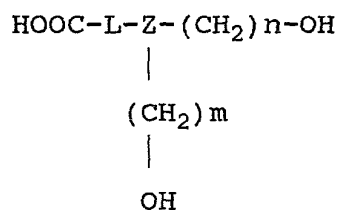


in which p represents a natural number between 1 and 15 and M is a detectable label, to prepare a support as claimed in claims 2-5.

7. Process for the production of a support as claimed in claims 2-5, comprising the following steps:

- a) preparing a trifunctional spacer containing two reactive hydroxyl groups and one reactive amino group
- b) introducing a protective group on a hydroxyl group
- c) converting the carboxylic acid group of a molecule as claimed in claim 6 into an activated ester
- d) coupling the activated ester to the reactive amino group of the trifunctional spacer
- e) coupling the hydroxyl group of the trifunctional spacer which is still free to the support material.

8. Use of a trifunctional spacer having the structure



in which

- Z is either CH or N
- L is a linker having the structure $-(CH_2)_p-$ or the structure $-(CH_2)_p-CO-NH-$ and
- m, n and p each, independently of one another, a natural number between 1 and 15,

to prepare a support as claimed in claims 2-5.

9. Process for the production of a support as claimed in claims 2-5, comprising the following steps:
 - a) preparing a trifunctional spacer as claimed in claim 8
 - b) introducing the protective group on a hydroxyl group
 - c) converting the carboxylic acid group of the trifunctional spacer into an activated ester
 - d) coupling a detectable molecule containing a free amino group by reacting the active ester with the amino group
 - e) coupling the hydroxyl group that is still free to the support material.
10. Use of a support as claimed in claims 2-5 to synthesize 3'-labelled nucleic acids.
11. 3'-labelled nucleic acid molecule prepared with the aid of a support as claimed in claims 2-5.
12. Nucleic acid molecule which contains a substituent having the partial structure



to the 3'-position of the 3'-terminal ribose, in which M is a detectable label such as a fluorescent dye.

13. Labelling reagent as claimed in claim 1, characterized in that O-K is a phosphoramidite.
14. Labelling reagent as claimed in claim 13, characterized in that the detectable label M is a fluorescent dye, preferably fluorescein.
15. Use of a labelling reagent as claimed in claims 13-14 to synthesize labelled nucleic acids.
16. Labelled nucleic acid molecule prepared with the aid of a labelling reagent as claimed in claims 13-14.
17. Nucleic acid molecule as claimed in claim 16 containing a substituent having the partial structure



in which M is a detectable label such as a fluorescent dye.